REMARKS/ARGUMENTS

Favorable reconsideration of this application in light of the following discussion is respectfully requested.

Claims 20-22, 24, and 27-28 are currently pending in the application; Claims 20-22, 24, and 27-28 are amended by way of this present amendment. No new matter is added.

By way of summary, the Official Action presents the following issues: Claims 20 and 24 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention; Claims 20-21, 24 and 28 stand rejected under 35 U.S.C. § 102(b) as being anticipated by McGirr et al. (U.S. Patent No. 5,129,098, hereinafter McGirr); Claims 20 and 24 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Sato et al. (U.S. Patent No. 5,203,020, hereinafter Sato); Claims 24, and 27-28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over McGirr in view of Kloker et al. (U.S. Patent 5,214,705, hereinafter Kloker).

Applicants appreciate the time taken by Examiner Grier on February 3, 2004 to confirm via telephone that the Outstanding Official action is a non-final action. Clarification was needed, as in the "Office Action Summary" both the boxes indicating that the action is "final" and "non-final" were checked. However, based on the content of the Official Action, it was believed that the outstanding Official Action is non-final. Confirmation that the outstanding Official Action is non-final, as discussed via telephone, is respectfully requested.

Applicants also acknowledge with appreciation the courtesy of the interview granted by Examiner Grier to Applicants representatives on March 25, 2004. During the interview, the Applicants' invention was explained in light of the applied prior art. Also, claim language was discussed that Examiner Grier indicated would better define the novel features

of Applicants' invention. Specifically, "audio control signal" has been amended to read "acoustic control signal" since the control signal is an acoustic/audible signal.

The Official Action rejected Claim 20 under 35 U.S.C. § 112, second paragraph, as being indefinite. In light of the discussion with Examiner Grier, this rejection is believed to have been overcome.

The Official Action states that it is unclear how "the controlled apparatus, which is the reception apparatus, outputs its own control signal..." However, as described in the discussion with Examiner Grier, the language in amended Claim 20 recites an "...apparatus to be controlled, which includes an acoustic control signal reception apparatus for receiving said acoustic control signal... and for outputting as a sound wave, said control instruction corresponding to said acoustic control signal..." As discussed in the interview, the control signal is received by the control signal reception apparatus, which is part of the object to be controlled, and the reception apparatus outputs the corresponding control signal as a sound wave. This output sound wave is then interpreted by another component (other than the reception apparatus) of the object to be controlled, which resultantly outputs a control signal to control the object to be controlled.

Accordingly, Applicant requests that the rejection of Claim 20 under 35 U.S.C. § 112, second paragraph, be withdrawn.

The Official Action rejected Claim 24 under 35 U.S.C. § 112, second paragraph, as being indefinite. As discussed in the interview, Claim 24 has been amended to read "the audio signal" instead of "an audio signal" to provide proper antecedent basis. Accordingly, applicant requests that the rejection of Claim 24 under 35 U.S.C. § 112, second paragraph, be withdrawn.

The Official Action has rejected Claims 20-21, 24 and 28 under 35 U.S.C. § 102(b) as being anticipated by McGirr. The outstanding Office Action asserts that McGirr teaches all the elements of Claims 20 and 24, Applicants respectfully traverse this assertion.

An exemplary embodiment of the invention, as recited in amended Claim 20, relates to an acoustic control signal control system including a transmitter that is configured to transmit the acoustic control signal together with an audio signal. The system also includes a device to be controlled by the acoustic control signal which is outfitted with an acoustic control signal reception apparatus for receiving the transmitted signals. The signal reception device has the ability to output the acoustic control signal as a sound wave and the device to be controlled is capable of processing and interpreting the output instructions. One embodiment of the invention might include instructions to control a television, or to control a recording device connected to a television.[1] Amended Claim 24 also recites similar terms.

For example, the acoustic control signals consist of DTMF signals, which correspond to various commands to control a television.[2] The acoustic DTMF signal is received by the control signal reception device in the television and is decoded.[3] The acoustic control signal is then output as an audible sound wave and a decoder in the object to be controlled (the television) decodes the audible DTMF tone(s) and generates a control instruction based on the received DTMF signal. The television is subsequently controlled based on the resulting control instruction.[4]

Claim 20 recites, *inter alia*, an audio control signal based control system comprising:

> "an acoustic control signal transmission apparatus for transmitting an acoustic control signal corresponding to a control instruction and an audio signal to be transmitted; and
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> an apparatus to be controlled, which includes an acoustic control signal reception apparatus... and for outputting as a sound wave, said control instruction corresponding to said acoustic control signal..."

[1] Application at page 28 and Figure 12.
[2] Application at Fig. 13.
[3] Application at Fig. 7.
[4] Application at Fig. 10 and pages 25-26.

McGirr describes a radio telephone that uses a receive signal strength indicator (RSSI) to control transmission power of transmitted signals. McGirr discusses using an RSSI value to measure the prevailing transmission propagation conditions, and controlling the gain of a power amplifier at the output of the transmitter of a radio telephone based on the measured conditions.[5] More specifically, McGirr describes that a digital representation of an RSSI is derived from a received communication signal and provided to a central processing unit (CPU) on board the radio telephone, which uses the RSSI data in generating a digital control signal.[6] These digital values are selected to produce a transmitter output power level tailored to those prevailing propagation parameters. An automatic gain control (AGC) circuit converts this control signal into an appropriate analog AGC signal for controlling the gain of the radio frequency (RF) power amplifier of the transmitter.[7] Thus, McGirr teaches that the power of the radio telephone is controlled based on the detected received power from the base station transmission.

As discussed above, the control signal transmitted in an exemplary embodiment of the invention is an acoustic control signal. McGirr describes a device that includes a signal processor for processing both audio signals from a microphone and control signals from a CPU.[8] McGirr specifically describes that the control signals in his device represent digitized values, and that a received signal is separated into "audio and control signals."[9] It is well known in the art that control signals transmitted in wireless telephone systems are not acoustic control signals, but are data signals used to coordinate communications in the wireless network.

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[5] McGirr at column 2, lines 5-10.
[6] McGirr at column 2, lines 11-15.
[7] McGirr at column 2, lines 16-25.
[8] McGirr at column 4, lines 1-8.
[9] McGirr at column 4, lines 35-40.

Also, the control signals generated internal to McGirr's device for controlling the output power of a transmitted signal are digitized data signals with no audio component. Both types of control signals (internal and received) are protocol-based data signals used to manage the communications between a terminal and a base station. In other words, they are data control signals used to control the transmission of an audio signal, but they are not acoustic control signals. Therefore, McGirr fails to suggest or disclose an apparatus for transmitting an acoustic control signal as recited in amended Claims 20 and 24 of the invention.

Amended Claim 20 also recites that the received acoustic control signal can be output as a sound wave. As described above, the only control signals used in McGirr's device are data-based control signals used to either control the power of a transmitted signal or to coordinate the device's ability to communicate on a network. Therefore, these signals are not acoustic signals and can not be output as a sound wave as described in amended Claim 20.

Accordingly applicant requests that the rejection of Claims 20-21, 24 and 28 under 35 U.S.C. § 102(b) be withdrawn.

The Official Action also rejected Claims 20 and 24 under 35 U.S.C. § 102(b) as being anticipated by Sato. This rejection is respectfully traversed.

Sato describes a method and apparatus for reducing power consumption in a radio telecommunication device by intermittently powering a radio telephone device when the device is unable to receive service, or detect a signal, from a wireless network.[10] As described above with respect to McGirr, Sato only describes the use of control signals in the context of coordinating wireless communications in a wireless device.[11]

[10] Sato at column 2, lines 20-50.
[11] Sato at column 4 lines 1-8,

The control signals described by Sato are data control signals used to control the transmission of an audio signal and are not acoustic control signals.[12] Therefore, Sato fails to disclose or suggest the transmission or reception of an acoustic control signal as recited in amended Claims 20 and 24. Also, Sato describes that when a signal is received by his device it is split into a control signal component and into an audio signal component.[13] Therefore, even if the control signal did have an audio component the structural limitations of Sato's device would prevent such a control signal from being output as a sound wave as recited in amended Claim 20.

Accordingly applicant requests that the rejection of Claims 20 and 24 under 35 U.S.C. § 102(b) be withdrawn.

Claims 24, and 27-28 were rejected under 35 U.S.C. § 103(a) as being unpatentable over McGirr in view of Kloker. This rejection is respectfully traversed because, as discussed above, McGirr does not disclose all the elements of the pending claims, and therefore the Official Action does not present a *prima facie* case of obviousness with regard to any of the pending claims. Therefore, the addition of Kloker to McGirr fails to cure the deficiencies of McGirr with respect to Claims 24, and 27-28.

Accordingly, Applicant respectfully requests the rejection of Claims 24, and 27-28 under 35 U.S.C. § 103(a) be withdrawn.

[12] Sato at column 4, line 54-column 5, line 24.
[13] Sato at column 5, lines 17-23.

Consequently, in view of the present amendment and in light of the foregoing comments, it is respectfully submitted that the invention defined by amended Claims 20-22, 24, and 27-28 is definite and patentably distinguishing over the prior art. The present application is therefore believed to be in condition for formal allowance and an early and favorable reconsideration of the application is therefore requested.

Respectfully submitted,

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